PATENT COOPERATION TREATY

PCT

Translation INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P27723/WO Kf	FOR FURTHER ACTION	See Form PCT/IPEA/416						
International application No.	International filing date (day/month/year)	Priority date (day/month/year)						
PCT/EP2004/001154	09.02.2004	13.03.2003						
International Patent Classification (IPC) or nation		130001200						
Applicant	onal classification and if C							
ROHDE & SCHWARZ GMBH & CO. KG								
 This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 								
i -	This REPORT consists of a total of 6 sheets, including this cover sheet.							
	to the International Bureau) a total of $\underline{3}$							
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.								
	, containing a sequence listing and/or tables							
	related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).							
4. This report contains indications relati								
Box No. I Basis of the	Box No. I Basis of the report							
Box No. II Priority								
Box No. III Non-establi	Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability							
Box No. IV Lack of unit	Box No. IV Lack of unity of invention							
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement							
Box No. VI Certain doc	Box No. VI Certain documents cited							
Box No. VII Certain defe	Box No. VII Certain defects in the international application							
Box No. VIII Certain observations on the international application								
Date of submission of the demand	Date of completion	Date of completion of this report						
Name and mailing address of the IPEA/EP	Authorized officer							
Facsimile No.	Telephone No.							

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/001154

Box	No. I	Basis of the report		- 		
1.	 With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item. 					
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:					
		international search (Rule 12.3 and 23.1(b))				
		publication of the international application (Rule 12.4)				
		international preliminary examination (Rule 55.2 and/	or 55.3)			
2.	With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report): the international application as originally filed/furnished					
	\triangle	the description:				
		pages 1-11		as originally filed/furnished		
		pages*	received by this Authority on			
		pages*	received by this Authority on			
	\boxtimes	the claims:				
		nos.		as originally filed/furnished		
		nos.*	as amended (togethe	r with any statement) under Article 19		
				15.04.2005 with letter		
		nos.*	received by this Authority on			
	M	the drawings:				
		sheets 1/5-5/5		as originally filed/furnished		
		sheets*	received by this Authority on			
		sheets*	received by this Authority on			
		a sequence listing and/or any related table(s) - see Supplem	ental Box Relating to Sequence L	isting.		
3.		The amendments have resulted in the cancellation of:				
		the description, pages				
		the claims, nos.		- 		
				•		
4.		This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as file.	led, as indicated in the Supplement	ntal Box (Rule 70.2(c)).		
		the description, pages				
		the claims, nos.				
		the drawings, sheets/figs				
		the sequence listing (specify):				
	any table(s) related to sequence listing (specify):					
*	If item 4 applies, some or all of those sheets may be marked "superseded."					

International application No.

			<u> </u>	PCT/EP2004/001154	
Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
tatement			<u> </u>		
Novelty (N) Inventive step (IS)			1-6		
		Claims Claims		YE	
Industri	al applicability (IA)	Claims	1-6	YE	
Citations as	nd explanations (Rule	70.7)			
ι.	. This report makes reference to the following document:				
	D1: EP-A-	0 283	3 275 (FUJITSU LTD) 21	September 1988	
2.	The present application does not meet the requirements of PCT Article 33 because the subject matter of claims 1-6 does not involve an inventive step within the meaning of PCT Article 33(3).				
2.1	D1 discloses (the references in parentheses are to this document):				
	phase/indica • the ou (3) is and Q2E	frequented in the truck of truck of the truck of truck of the truck of tr	ency comparator (see n the search report), signal (RS) of the re ated only if both out both edge-triggered s	the passages in which set logic unit put signals (Q1A storage elements	
	Invention Industriations a	citations and explanatement Novelty (N) Inventive step (IS) Industrial applicability (IA) itations and explanations (Rule of the county of	atement Novelty (N) Claims Claims Inventive step (IS) Claims Cla	Attenuent Novelty (N) Claims Inventive step (IS) Claims Claims Claims 1-6 Claims 1-6 Industrial applicability (IA) Claims 1-6 Claims 1-7 This report makes reference to the document: D1: EP-A-0 283 275 (FUJITSU LTD) 23 2. The present application does not me requirements of PCT Article 33 because the properties of the continuous step within the meaning of PCT Article 33 because the properties of the references in particle of the references in particle document): • a phase/frequency-locking loop we phase/frequency comparator (see indicated in the search report), • the output signal (RS) of the references in particle and Q2B) of both edge-triggered segment of the post of the references in particle and Q2B) of both edge-triggered segment of the post of t	

are deactuated (see column 8, lines 39-53; note

International application No.
PCT/EP2004/001154

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

that both output signals (Q_{1A} and Q_{2B}) are deactuated if the signals Q_{1a} and Q_{2b} are actuated), and

 the reset logic unit (3) is implemented with inverse logic using an asynchronous leveltriggered RS-storage element (NG₂, NG₄), wherein the reset input of the asynchronous leveltriggered RS-storage element (NG₂, NG₄) is supplied by the output signal of an inverted AND-gate.

Claim 1 differs therefrom only in that

- the reset input is supplied by an OR-gate and that
- each of the two edge-triggered storage elements has only one output with non-inverted logic.

These distinguishing features have the effect of minimizing wiring overheads. The invention thus addresses the problem of reducing wiring overheads.

The solution provided to the problem is obvious to a person skilled in the art and does not involve an inventive step.

A person skilled in the art knows from general circuit teaching that an OR-function can be implemented both by an OR-gate (alternative 1) and by an AND-gate with inverted signals (alternative 2) and that both circuit arrangements are mutually

International application No.
PCT/EP2004/001154

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

interchangeable. The optimal arrangement should be selected according to the conditions of the particular circuit environment.

To a person skilled in the art the inverting AND-gate NG_3 in D1 evidently implements an OR-function according to alternative 2, since the inputs of the gate are connected to the inverted outputs Q_{1a} and Q_{2b} of storage elements 1 and 2. A circuit arrangement according to alternative 2 is evidently selected in D1 in order to minimize the output load of outputs Q_{1A} and Q_{2B} of storage elements 1 and 2.

The advantages of a circuit arrangement according to alternative 1 are also immediately clear to a person skilled in the art. In alternative 1 an OR-gate is used which, because of the required inversion of the input signals, is connected to the outputs Q_{1A} and Q_{2B} of storage elements 1 and 2. Since, therefore, the inverted outputs Q_{1a} and Q_{2b} of storage elements 1 and 2 are no longer necessary, a person skilled in the art would dispense with them, recognizing that a circuit arrangement according to alternative 1 has the effect of reducing wiring overheads. He would use this alternative where applicable to solve the problem addressed by the invention, without thereby being inventive.

Therefore, claim 1 does not meet the requirements of PCT Article 33(3).

International application No.
PCT/EP2004/001154

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 2.2 Since the subject matter of claim 1 contains all the features of claim 6, independent claim 6 therefore also fails to meet the requirements of PCT Article 33(3).
- 2.3 Dependent claims 2-5 do not contain any features which, in combination with the features of any claim to which they refer back, meet the PCT requirements for inventive step because the features of claims 2, 3 and 5 are directly shown in D1, figure 1, and the features of claim 4 are evidently directly known to a person skilled in the art.

Therefore, these claims also fail to meet the requirements of PCT Article 33(3).